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AUDIOVISUAL EQUIPMENT AND MATERIALS IN U.S. PUBLIC SCHOOL DISTRICTS--SPRING 1961.

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A NATIONAL SURVEY OF AUDIOVISUAL MEDIA IN U.S. PUBLIC SCHOOLS WAS CONDUCTED. THE REPORT PROVIDES NATIONAL ESTIMATES OF THE AMOUNT OF AUDIOVISUAL MATERIALS AND EQUIPMENT AVAILABLE AND NEEDED AS OF SPRING 1961. ALL ESTIMATES WERE BASED ON FIGURES SUPPLIED BY 2,927 OF THE 35,482 PUBLIC ELEMENTARY AND SECONDARY SCHOOL DISTRICTS (OCTOBER 1959 NATIONAL CENSUS). THESE DISTRICTS ENROLLED 58 PERCENT OF THE TOTAL U.S. PUBLIC SCHOOL POPULATION. ESTIMATES WHICH WERE REPORTED ARE LISTED--(1) TOTAL AVAILABLE NUMBERS AND CALCULATED ERRORS OF ESTIMATE FOR 20 TYPES OF MATERIAL AND EQUIPMENT, (2) TOTAL AVAILABLE NUMBERS AND ADDITIONAL NUMBERS BELIEVED NEEDED FOR 20 TYPES OF MATERIAL AND EQUIPMENT, (3) OWNERSHIP OF FILM, FILMSTRIP, AND SLIDE PROJECTORS BY SCHOOL DISTRICT SIZE, (4) OWNERSHIP OF RECORD PLAYERS, RADIO RECEIVERS, TELEVISION RECEIVERS, TAPE RECORDERS, LANGUAGE LABORATORIES, AND OVERHEAD AND OPAQUE PROJECTORS BY SCHOOL DISTRICT SIZE, (5) OWNERSHIP OF 16-MM. FILM AND FILMSTRIP PRINTS BY SCHOOL DISTRICT SIZE, AND (6) AVERAGE NUMBER OF ITEMS PER SCHOOL FOR 16-MM. PROJECTORS, COMBINATION SLIDE-FILMSTRIP PROJECTORS, TAPE RECORDERS, AND OVERHEAD AND OPAQUE PROJECTORS BY SCHOOL DISTRICT SIZE. ALMOST ALL OF THE SURVEYED SCHOOL DISTRICTS STATED THAT THEIR SCHOOLS HAD ONE OR MORE OF FOUR BASIC EQUIPMENT ITEMS--16-MM. SOUND PROJECTOR, RECORD PLAYER, SLIDE-FILMSTRIP PROJECTOR, AND TAPE RECORDER. FILMSTRIPS WERE THE MOST NUMEROUS SCHOOL-OWNED MATERIAL. (JH)

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AUDIOVISUAL EQUIPMENT AND MATERIALS IN U.S. PUBLIC SCHOOL DISTRICTS—SPRING 1961.

Preliminary Tabulation prepared for the
U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE,
Office of Education, by the Bureau of Social Science Research, Inc.

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AUDIOVISUAL EQUIPMENT AND MATERIALS IN U.S. PUBLIC SCHOOL DISTRICTS—SPRING 1961.

In 1961 the U.S. Office of Education contracted with the Bureau of Social Science Research for the conduct of a national survey of audiovisual media in the public schools. The following tables, describing the audiovisual resources available, have been excerpted from the preliminary report on the first part of the survey.[1]

Broadly speaking, present day programs are organized around the 16 mm sound projector, the record player, the slide-filmstrip projector, and the tape recorder. Superintendents, in all except the very smallest districts, have been able to equip each of their schools with one or more of these four basic items. More recently developed media are not so widely distributed. Ownership of this equipment is concentrated in the larger districts in limited quantity — often only one or two per district. However, the supply of overhead projectors, language laboratories, and television sets has increased rapidly since 1959, and should continue to increase as school administrators implement their plans to buy more of this equipment.

Looking at materials, filmstrips are far and away the most numerous school-owned material. To date, only districts enrolling 12,000 or more students have bought sound films in any quantity, although superintendents in districts of all sizes want to increase their film inventories. The next few years should see considerable growth in the number of tape recordings in the schools — the majority of which will be foreign language tapes.

THE PARTICIPATING DISTRICTS

The national estimates of the amount of equipment and materials available are based on figures supplied by 2,927[2] of the 35,482 public elementary and secondary school districts (October 1959 national census). These districts enroll 53 percent of the public school population. They include 1,238 or 51 percent of the 2,444 largest school districts in the nation and a sample of each of the smaller enrollment size categories from all parts of the country.

HOW THE ESTIMATE WAS BUILT

All replying school districts were grouped both by region and size. Those belonging to one enrollment size group within a region were treated as a unit for analysis. As there are 11 size and eight regional categories, there were 88 units in the analysis.

After the total amount of an item was obtained for all respondents in a regional-size group, the mean for this group was used to estimate the amount owned by all other districts in that category. For example, if eight out of ten school districts enrolling 12,000-24,999 pupils in one region reported a total of 400 16 mm sound projectors, the total for the whole group would be estimated as $\frac{400}{8} \times 10 = 500$. The 88 regional-size group totals were then summed to arrive at a national figure.

ACCURACY OF NATIONAL TOTALS

While the procedure described above gives the most probable total for any item, there is the possibility of error in any estimate — both because the estimates are built from a sample and because the reports from the school districts may not be complete for all items.

Sampling error is relatively easy to measure. The standard error of estimate for each item surveyed is given in Tables 1 and 2, both in number of units and as a percentage of the total amount of the item.

The most popular items of standard equipment, owned by over 90 percent of the school districts in all but the two smallest size groups, have the lowest error of estimate. The margins of error increase as frequency of ownership decreases. Therefore, the estimates of error are higher for television sets, language laboratories, and overhead projectors where only 50 percent or less of the sample school districts own these items. The margin of error also increases when there is high variability in the **number** of items owned by districts in the same size group. For example, school systems enrolling 3,000-5,999 students seldom have more than two language laboratories — if they have any at all; however, the number of single-purpose filmstrip projectors or 2 x 2 slide projectors in these same districts range from zero to 77.

High variability in both frequency of ownership and number of items owned affects all of the estimates of error associated with the materials given in Table 2.

Reporting error is not so easily measured. However,

[1]The full report to be available through the Superintendent of Documents, U.S. Government Printing Office, early in 1963 as an Educational Media Program Monograph of the U.S. Office of Education.

[2]These replies represent 40.5 percent of an original sample of 7,236 districts. The response rate ranged from 93.5 percent of the very largest districts to 25 percent of the very smallest.

two major possible sources of inaccuracy in reporting can be noted:

1) the size, expense, relative scarcity, and date of acquiring an item; and
2) the presence or absence of a central inventory for a particular item.

Large expensive pieces of equipment, particularly those recently acquired such as television receivers and language laboratories, are relatively easy to count. Standard pieces of **school-purchased** equipment which project specialized materials are more accurately counted than are those less expensive, every-day items bought by the PTA or senior class and never recorded on a central inventory. The totals for 16 mm sound projectors, combination slide-filmstrip projectors, overhead and opaque projectors should, therefore, be more accurate than those for record players and radios, or even tape recorders. An exact count of school-owned record players and radios is particularly difficult to obtain as these items may be supplied by individual teachers on a permanent loan basis.

As far as materials are concerned, the totals for 16 mm sound film titles should be the most accurate; those for disc recordings, the least. Although a specialized material, filmstrips are inexpensive enough to be bought by individual schools or departments out of general funds. In large districts, both of these materials are frequently bought by individual schools, departments, and even teachers without being recorded on a central inventory.

Eleanor P. Godfrey, Study Director
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TABLE 1 **ESTIMATED AMOUNT OF AUDIOVISUAL EQUIPMENT IN U.S. PUBLIC SCHOOL DISTRICTS, SPRING 1961**

Type of Equipment	Total Number	Error of Estimate	
		Number of Units	Percent of Total
16 mm sound projectors	125,500	± 2,020	1.6
Combination slide-filmstrip projectors	136,000	± 2,940	2.2
Filmstrip (only) projectors	33,000	± 2,830	8.6
2x2 slide (only) projectors	6,400	± 700	10.9
Record players	364,800	± 7,250	2.0
Tape recorders	88,200	± 1,930	2.2
Radio receivers	108,600	± 3,970	3.6
Television receivers	50,000	± 2,380	4.8
Portable public address systems	30,300	± 1,070	3.5
Central sound systems	28,700	± 980	3.4
Overhead projectors	13,900	± 750	5.4
Opaque projectors	39,400	± 1,080	2.7
Language laboratory installations	4,600	± 320	6.9

TABLE 2 ESTIMATED AMOUNT OF AUDIOVISUAL MATERIALS IN U.S. PUBLIC SCHOOL DISTRICTS, SPRING 1961

Type of Material	Total Number	Error of Estimate	
		Number of Units	Percent of Total
16 mm sound film titles	542,600	± 38,400	7.1
16 mm sound film prints	752,600	± 47,100	6.3
Filmstrip titles	6,231,700	± 371,400	5.9
Filmstrip prints	7,598,600	± 582,400	7.7
Disc recordings	3,043,100	± 158,000	5.2
Tape recordings	445,800	± 32,300	7.2
2x2 slides	1,286,300	± 107,900	8.4

TABLE 3 **ADDITIONAL AUDIOVISUAL EQUIPMENT NEEDED BY U.S. PUBLIC SCHOOL DISTRICTS, 1961.**

Type of Equipment	Present Amount	Number Needed	Percentage Increase Over Present Amount
16 mm sound projectors	125,500	25,700	20.5
Combination slide-filmstrip projectors	136,000	34,500	25.4
Filmstrip (only) projectors	33,000	11,300	34.2
2x2 slide (only) projectors	6,400	6,400	100.0
Record players	364,800	62,100	17.0
Tape recorders	88,200	34,700	39.3
Radio receivers	108,600	31,800	29.3
Television receivers	50,000	49,600	99.2
Portable public address systems	30,300	8,700	28.7
Central sound systems	28,700	10,100	35.2
Overhead projectors	13,900	29,400	211.5
Opaque projectors	39,400	23,000	58.4
Language laboratory installations	4,600	8,500	184.8

TABLE 4 **ADDITIONAL AUDIOVISUAL MATERIALS NEEDED BY U.S. PUBLIC SCHOOL DISTRICTS, 1961.**

Type of Material	Present Amount	Number Needed	Percentage Increase Over Present Amount
16 mm sound films (titles)	542,600	340,200	62.7
16 mm sound films (prints)	752,600	495,700	65.9
Filmstrips (titles)	6,231,000	1,411,700	22.6
Filmstrips (prints)	7,364,000	2,200,000	29.9
Disc recordings	3,043,100	780,900	25.7
Tape recordings	445,800	380,900	85.4
2x2 slides	1,286,300	718,800	55.9

TABLE 5 OWNERSHIP OF FILM, FILMSTRIP AND SLIDE PROJECTORS BY SIZE OF SCHOOL DISTRICT.

Size of School District	District Reporting Projector Available*							
	16 mm		Slide-Filmstrip		Filmstrip (only)		2x2 Slide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total (All Groups)	2,724	93.2	2,589	88.6	1,030	40.6	513	20.2
0 – (75,000 or more)	29	100.0	28	96.6	12	41.4	10	34.5
1 – (25,000-74,999)	75	100.0	72	96.0	30	44.8	23	34.3
2 – (12,000-24,999)	196	100.0	190	96.9	72	50.0	60	41.7
3 – (6,000-11,999)	353	98.9	344	96.4	147	48.2	97	31.8
4 – (3,000- 5,999)	575	99.1	546	94.1	257	50.3	126	24.6
5 – (1,200- 2,999)	575	99.1	547	94.3	228	46.4	117	23.8
6 – (600- 1,199)	316	100.0	302	95.6	100	36.4	38	13.8
7 – (300- 599)	290	99.5	266	91.4	87	34.7	27	10.8
8 – (150- 299)	191	96.5	172	86.9	44	26.3	11	6.6
9 – (50- 149)	106	72.6	87	59.6	40	28.0	4	2.8
10 – (1- 49)	18	11.6	35	22.6	13	8.4	0	0.0

*The total number of districts replying for 16 mm and combination slide-filmstrip is 2,927; that for filmstrip (only) and 2x2 slide projectors is 2,537

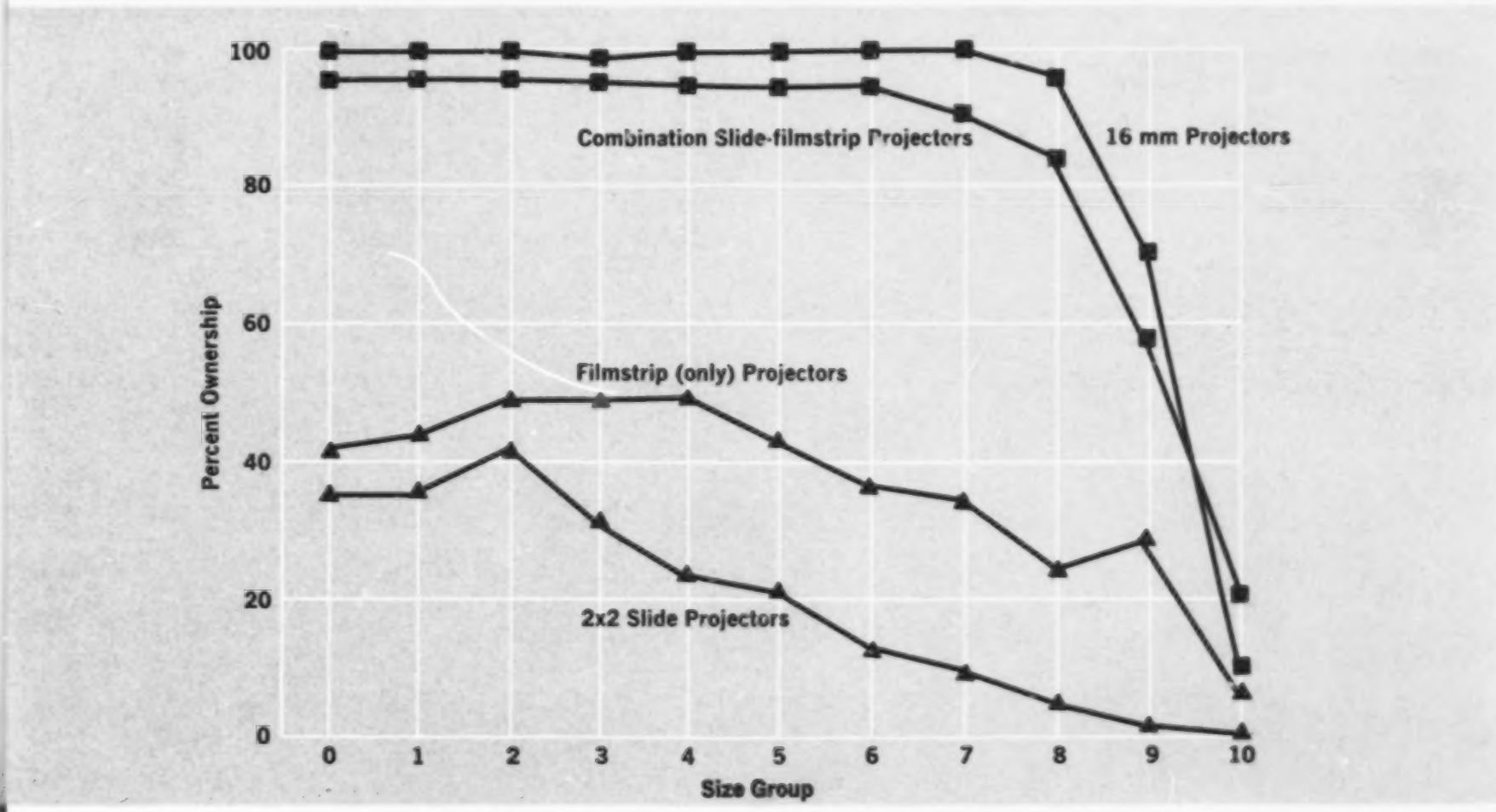

FIGURE 1: OWNERSHIP OF FILM, FILMSTRIP AND SLIDE PROJECTORS

TABLE 6 OWNERSHIP OF RECORD PLAYERS, RADIO RECEIVERS AND TELEVISION RECEIVERS BY SIZE OF DISTRICT.

Size of School District	District Reporting Item Available*					
	Record Players		Radio Receivers		Television Receivers	
	Number	Percent	Number	Percent	Number	Percent
Total (All Groups)	2,727	93.3	1,963	67.2	1,495	51.1
0 — (75,000 or more)	27	93.1	28	96.6	29	100.0
1 — (25,000-74,999)	73	97.3	62	82.7	64	85.3
2 — (12,000-24,999)	194	99.0	160	81.6	161	82.1
3 — (6,000-11,999)	349	97.8	270	75.6	266	74.5
4 — (3,000- 5,999)	567	97.8	456	78.6	374	64.5
5 — (1,200- 2,999)	569	98.1	413	71.2	311	53.6
6 — (600- 1,199)	310	98.1	220	69.6	130	41.1
7 — (300- 599)	286	98.3	160	55.0	77	26.5
8 — (150- 299)	184	92.9	109	55.0	52	26.3
9 — (50- 149)	116	79.4	55	37.8	28	19.2
10 — (1- 49)	52	33.5	30	19.4	3	1.9

*The total number of districts replying for all three items is 2,927.

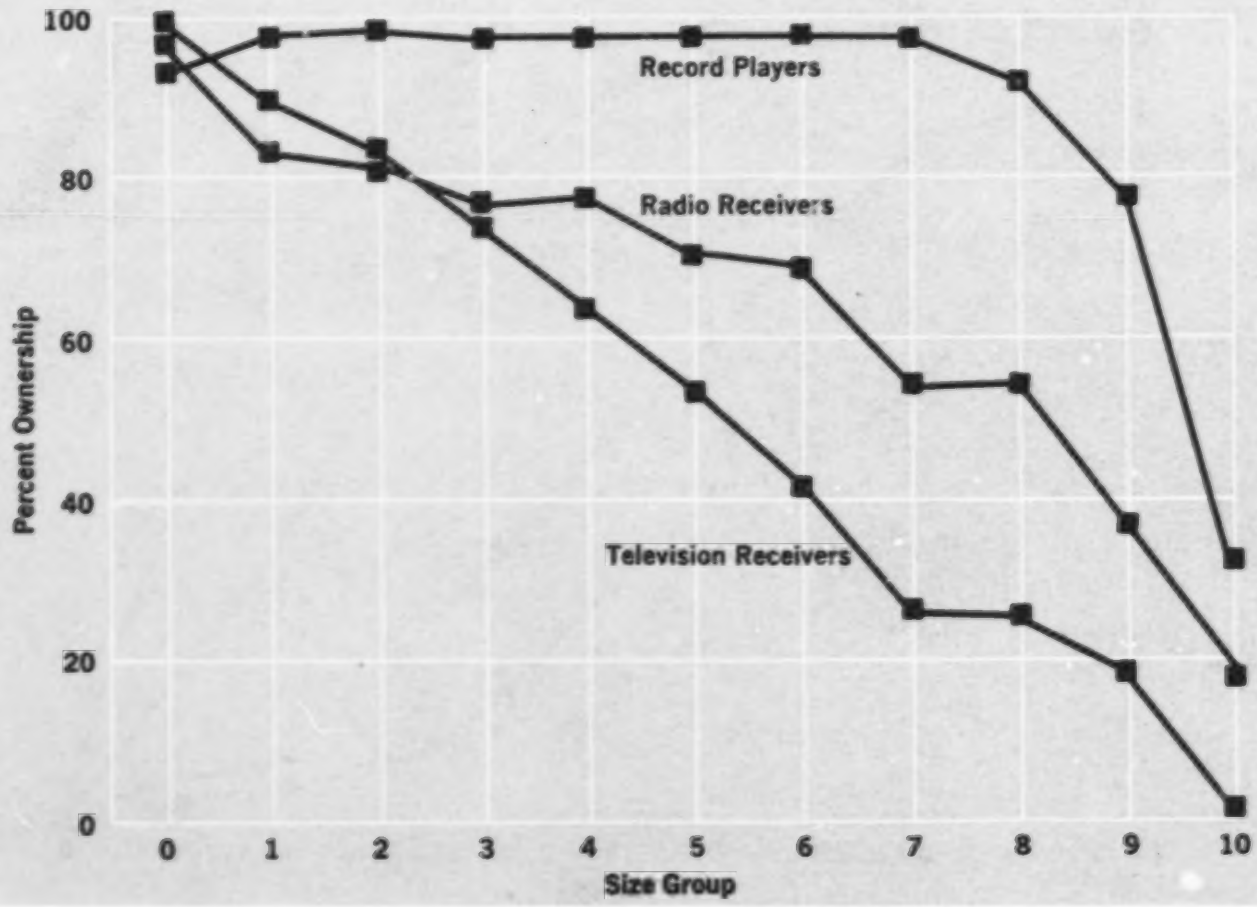

FIGURE 2: OWNERSHIP OF RECORD PLAYERS, RADIO RECEIVERS, AND TELEVISION RECEIVERS

TABLE 7 OWNERSHIP OF TAPE RECORDERS, LANGUAGE LABORATORIES, OVERHEAD AND OPAQUE PROJECTORS, BY SIZE OF SCHOOL DISTRICT.

Size of School District	Districts Reporting Item Available*							
	Tape Recorders		Language Laboratories		Overheads		Opaques	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total (All Groups)	2,564	87.7	846	28.9	1,358	46.4	2,259	77.3
0 — (75,000 or more)	29	100.0	24	82.8	26	89.6	28	96.6
1 — (25,000-74,999)	73	97.3	56	74.7	67	89.4	74	98.7
2 — (12,000-24,999)	194	99.0	109	55.6	170	86.7	192	98.0
3 — (6,000-11,999)	352	98.6	167	46.8	264	73.9	351	98.3
4 — (3,000- 5,999)	572	98.6	239	41.2	350	60.3	552	95.2
5 — (1,200- 2,999)	567	97.8	168	29.0	286	49.3	530	91.4
6 — (600- 1,199)	310	98.1	51	16.1	107	33.9	259	82.0
7 — (300- 599)	260	89.3	20	6.9	63	21.6	170	58.4
8 — (150- 299)	141	71.2	10	5.0	17	8.6	73	36.9
9 — (50- 149)	59	40.4	2	1.4	7	4.8	28	19.2
10 — (1- 49)	7	4.5	0	0.0	1	0.6	2	1.3

*The total number of districts replying for all four items is 2,927.

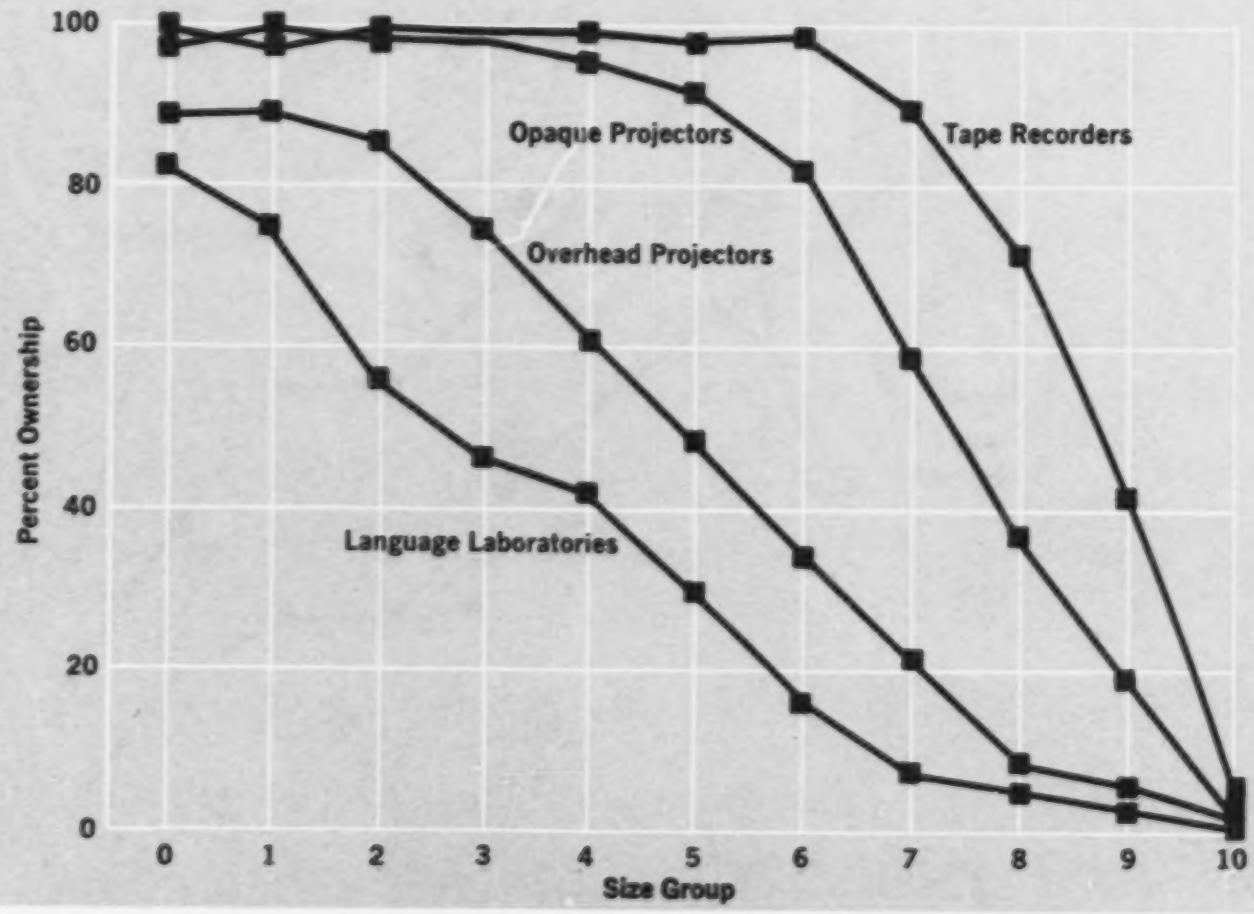

FIGURE 3: OWNERSHIP OF TAPE RECORDERS, LANGUAGE LABORATORIES, OVERHEAD PROJECTORS AND OPAQUE PROJECTORS

TABLE 8 OWNERSHIP OF 16mm FILM AND FILMSTRIP PRINTS BY SIZE OF SCHOOL DISTRICT.

Size of School District	Districts Reporting Item Available*			
	16 mm Film Prints		Filmstrip Prints	
	Number	Percent	Number	Percent
Total (All Groups)	1,088	37.2	2,303	78.8
0 — (75,000 or more)	29	100.0	29	100.0
1 — (25,000-74,999)	70	93.3	69	92.0
2 — (12,000-24,999)	164	83.7	188	95.9
3 — (6,000-11,999)	254	71.1	316	88.5
4 — (3,000- 5,999)	286	49.3	501	86.4
5 — (1,200- 2,999)	178	30.7	506	87.2
6 — (600- 1,199)	44	13.9	254	80.4
7 — (300- 599)	31	10.6	209	71.8
8 — (150- 299)	21	10.6	142	71.7
9 — (50- 149)	8	5.5	76	52.0
10 — (1- 49)	3	1.9	13	8.4

*The total number of districts replying for both items is 2,927.

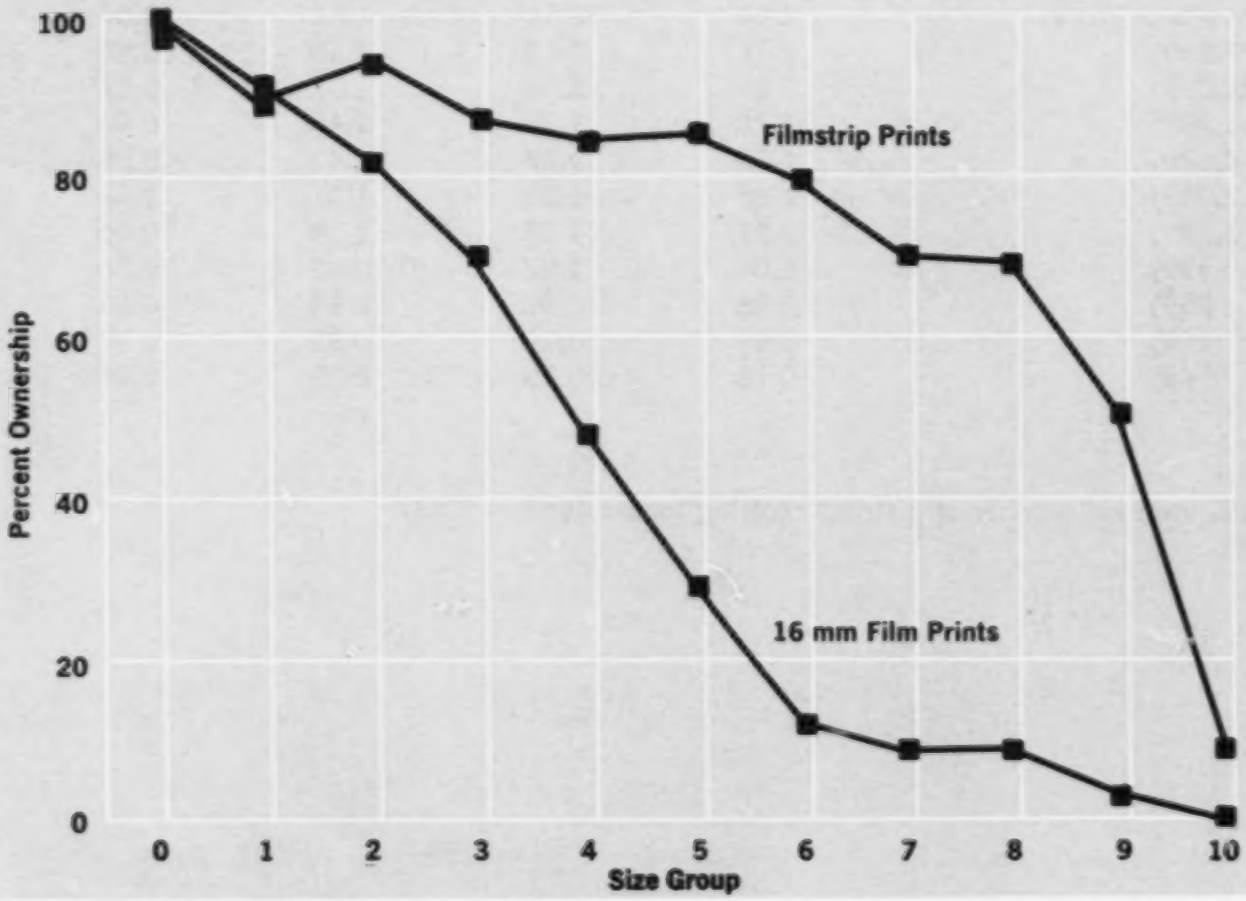

FIGURE 4: OWNERSHIP OF 16 MM FILM PRINTS AND FILMSTRIP PRINTS

TABLE 9 **16mm, COMBINATION SLIDE-FILMSTRIP PROJECTORS, TAPE RECORDERS, OPAQUE AND OVERHEAD PROJECTORS PER SCHOOL, SPRING 1961, BY SIZE OF SCHOOL DISTRICT.***

Size of School District	Number of Items Per School				
	16 mm Projectors	Combination Slide-Filmstrip Projectors	Tape Recorders	Opaque Projectors	Overhead Projectors
0 — (75,000 pupils or more)	2.64	2.51	1.52	0.64	0.16
1 — (25,000-74,999)	2.16	2.15	1.53	0.63	0.22
2 — (12,000-24,999)	2.08	2.03	1.57	0.61	0.31
3 — (6,000-11,999)	1.78	1.85	1.46	0.64	0.25
4 — (3,000- 5,999)	1.73	1.78	1.49	0.58	0.23
5 — (1,200- 2,999)	1.55	1.53	1.24	0.57	0.22
6 — (600- 1,199)	1.27	1.35	1.04	0.46	0.16
7 — (300- 599)	1.04	1.08	0.85	0.36	0.14
8 — (150- 299)	0.86	0.89	0.63	0.26	0.08
9 — (50- 149)	0.69	0.60	0.35	0.17	0.04
10 — (1- 49)	0.15	0.29	0.05	0.01	0.01

*For this analysis, the total number of districts replying for all items is 2,537.